

# Diagnosing dementia —

## *differentiating Alzheimer's from other forms of dementia*

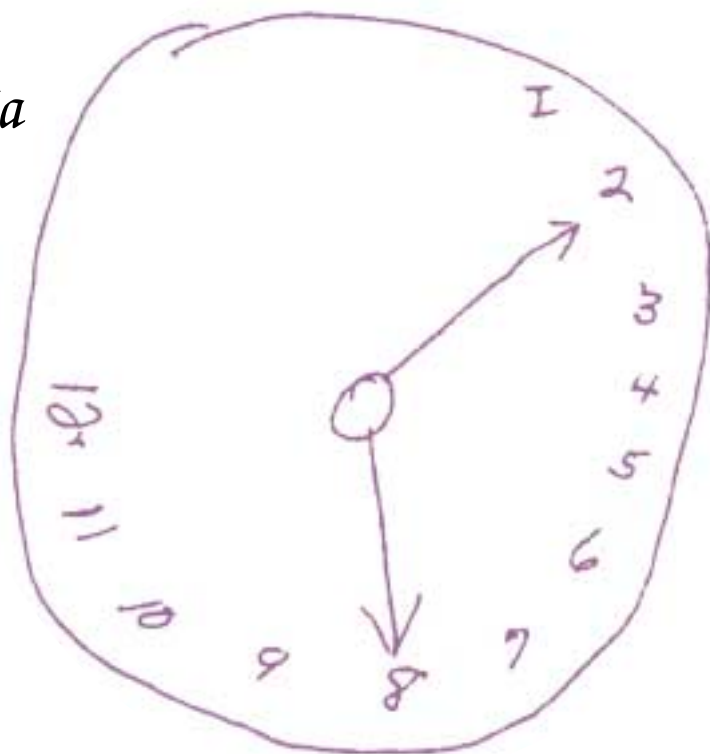
Olya Lechky

**M**any older people have mild and insignificant memory problems, such as misplacing their keys or eyeglasses. However, when a patient forgets what common objects are supposed to be used for, it is incumbent on the family physician to do a thorough examination because this might be an indicator of Alzheimer's disease (AD). Such confusion is one of the early signs caregivers and family physicians can be aware of to help in diagnosing AD and in differentiating AD from other, potentially reversible forms of dementia.

Given the increasing elderly population, AD is something that family physicians can expect to be seeing more frequently. Approximately 8–10% of people aged 65 have many cognitive and functional difficulties that are caused by AD. This figure soars to 35–40% in those aged 85 and over, according to Dr. Howard Bergman, professor of geriatric medicine at McGill University in Montréal.

The challenges of correctly diagnosing AD are not insubstantial. Published estimates of rates of misdiagnoses or no definitive diagnosis of 50–75% are not out of line, says Dr. John Maxted, director of education and training at the College of Family Physicians of Canada. “I wouldn't be surprised if the percentage is even higher because the correct diagnosis is often not made until 10 years into the disease,” he says.

Dr. Bergman was a member of the steering committee for the Canadian Consensus Conference on Dementia held in Montreal in 1998, whose results were published in the *Canadian Medical Association Journal* a year later.<sup>1</sup> Recommendations in the report have since been widely used in teaching medical students and family



### **Clock drawing test result indicative of dementia.**

Christensen, Donald, Primary Care Companion, *The Journal of Clinical Psychiatry*. v.4 (2), p.42, Copyright 2002, Physicians Postgraduate Press. Adapted/reprinted with permission.

physician residents and have also been instrumental in many initiatives to help family physicians play a leading role in the early diagnosis of AD. Plans for another consensus conference in the near future are underway to update the recommendations on early diagnosis and management. Meanwhile, one valuable resource for family physicians interested in the field of AD is a chapter written by Dr. Bergman and colleagues in the *Oxford Textbook on Primary Medical Care*.<sup>2</sup> “That would give family doctors a good sense of the best methods of diagnosing AD,” says Dr. Bergman.

When there are signs of multiple cognitive impairments and a decline in the skills of daily living, along with difficulties in familial-social relationships and community activities, it is the role of the family physician to step in, experts agree. Cognitive dysfunction can be due

to various medical reasons, so it can be difficult to decide which tests to use to make an accurate diagnosis of AD. There can be co-existing morbidity that interplays with AD and there is also the possibility that a senior's cognitive decline is due to conditions that cause symptoms of dementia, but may be reversible.

One excellent resource for making a differential diagnosis is the October 2003 edition of *Canadian Family Physician* that contains articles related to dementia. Of note, is a piece entitled: "Sad, but true: your father has dementia. An approach to announcing the diagnosis."<sup>3</sup> This article addresses the importance of frank disclosure to the patient and family. (See accompanying sidebar for further information on helpful resources and references for family physicians.)

AD is a complex diagnosis — and an often-frustrating one for busy family physicians who have limited time. However, geriatric medicine specialists agree that the family physician is the best front-line person to make an early diagnosis and to implement appropriate intervention strategies that might forestall a more rapid decline in cognition, or at least provide a better and safer quality of life. It's also important for physicians to support families and others close to the patient who can easily suffer from "caretaker burnout." This is especially true when personality changes occur. It is very wearing to be constantly sworn at and to try to control aggressive behaviour in a person who did not previously exhibit these qualities. On the other hand, a normally outgoing person might become meek and passive. Such personality flips are distressing to caregivers who do not know or understand the reasons for the changes.

Although challenging, an accurate diagnosis can be made with the help of only a small handful of diagnostic tools, says Dr. Steve Gottesman, a Toronto family physician who specializes in dementias and is a lecturer in family and community medicine at the University of Toronto. He notes that there is a large quantity of helpful peer-reviewed literature and professional and community resources, especially the Alzheimer's Society of Canada, to help family physicians who feel overwhelmed.

Dr. Gottesman's approach is first to rule out other conditions that can cause dementia or acute confusion. This can be done with routine lab tests and a referral for scans if vascular dementia, which often co-exists with AD, is suspected. Apart from vascular dementia, which is more common than previously thought, the family physician should be on the lookout for prescription drug interactions, cardiovascular conditions and neurological illnesses, such as Parkinson's disease. Vision and

hearing should be investigated. Family physicians should also bear in mind the possibility of depression, malnutrition, substance abuse (especially alcohol), regular use of over-the-counter drugs, herbal teas and other health food store remedies. To a lesser degree, the possibility of elder abuse, which can cause confusion and depression, should be considered. In addition, family physicians have to bear in mind a history of falls that cause damage or recent surgery under either a general or epidural anesthetic. Such episodes can bring on incipient AD sooner.

Dr. Gottesman's basic advice is that caregivers bring in all medications and herbal remedies that the patient is using. As well, it's important to find out whether the 'wee nip of sherry' in the evening is being underestimated, he says. The regular use of alcohol may not only cause interactions with medications, but can also be a significant factor in causing AD and other dementias. Screening for blood alcohol and benzodiazepine levels, along with liver function tests, may give a clearer picture of a patient's possible substance abuse.

A full physical examination is necessary, as is the mini-mental status examination (MMSE). The MMSE may seem overwhelming in a busy practice, but it can be done efficiently by training a nurse or secretary to administer the test for interpretation by a family physician.

Language and cultural-ethnic factors may come into play and might not give an accurate indication of a patient's cognitive status. In such cases, an experienced person of the same background from a community clinic with a large ethnic mix has a significant role as a good resource.

"Family members are not always objective, but they are good allies in forming a collaborative history. Family physicians have the luxury of being able to communicate with a lot of people to make a diagnosis of Alzheimer's," says Dr. Gottesman. He adds that it's important to inquire regularly about a patient's daily living habits, including driving a car, and hobbies. If the MMSE is not informative enough, clues of decline, such as neglect of personal hygiene, not being as sharp as previously at playing favourite games and general inattentiveness, difficulty in comprehending and using language would deserve close follow-up. Investigating cardiovascular status is of primary importance because vascular dementia can contribute to AD as the conditions often co-exist.

A convenient adjunctive screening tool to the MMSE is one pioneered by Dr. Morris Freedman (among others), head of the division of neurology at the

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Baycrest Centre for Geriatric Care in Toronto. In essence, the test involves asking a patient to draw a clock. The accuracy with which this is done can be a good indication of the degree of dementia.

“If one is going to use the clock method, then the time setting is important,” cautions Dr. Freedman. “Different time settings have different sensitivities in bringing out [cognitive] abnormalities.” Drawing hands pointing to 3 o’clock is easier than drawing 10 minutes after 11, for example. The method sounds simple enough but if a family physician or trained person asks a patient to draw 10 minutes after 11, he or she might draw 10 to 11. “This is a good screening tool for people in the early stages of Alzheimer’s because if you ask them to draw 20 after 8, there’s no hand on the clock to draw that person to. They may get drawn to a 2, which is not exactly a 20, but it’s got a 2 in it. As people start to get into more trouble with cognition, they will have trouble with 3 o’clock as well.”

Dr. Freedman cautions that asking a patient just to draw a clock does not constitute a complete assessment. Similarly, an MMSE is not a complete assessment either. “The caution is that some people have problems with clock drawing, but don’t necessarily have other problems, so the mini-mental and clock drawing together should be followed regularly to see if there’s a decline in both tests.”

Once a definitive diagnosis of AD is made, there are early treatment interventions to improve cognition. One such effective method is cognitive training pioneered by Dr. Sylvie Belleville, professor of neuropsychology at the University of Montreal. This is especially useful when a patient does not tolerate drugs well. Cognitive training requires referral to a clinic that is familiar with this method. The best way to find practitioners trained in this process is to contact the Alzheimer’s Society to find out where local clinics exist in various regions in Canada.

Although it is preferable to delay drug use until true cognitive impairment is evident, effective medications are available, such as cholinesterase inhibitors (donepezil, rivastigmine and galantamine) and the N-methyl-D-aspartate-receptor antagonist memantine. These medications are approved for general prescription use in Canada, says Dr. Serge Gauthier, director, research unit on AD and related disorders, McGill Centre for Studies in Aging. “Their efficacy has been well established compared to placebo in studies ranging from 3 to 12 months. There is ongoing debate as to their cost-effectiveness from a societal perspective, but there is no doubt as to their clinical benefit for at least half of patients [with mild to moderate disease].”

Dr. Carole Cohen, professor of psychiatry at the University of Toronto and a member of the steering

committee of the Canadian Consensus Conference on Dementia, believes knowledge of and interest in AD among family physicians is continually improving as an increasing amount of continuing medical education and literature have become available. Dr. Gauthier, agrees with Dr. Cohen that the diagnosis of AD is a fast-moving field with more screening tools in development. However, Dr. Cohen cautions, “There are still challenges in making a differential diagnosis and many things have to be kept in mind.”

Despite some gloomy statistics about family physicians’ lack of knowledge about AD, Dr. John Feightner, professor of family medicine at University of Western Ontario, London, says there is cause for optimism as more physicians are participating in a variety of educational efforts on this subject. In Ontario, these initiatives have been spearheaded by the Ontario chapter of the College of Family Physicians and \$2 million in funding from the Ontario government. The program is known under the umbrella name of Alzheimer’s Strategy—Physician Education Initiative. It includes a program called Peer Presenters in which experienced family physicians organize workshops and didactic learning sessions to educate their colleagues about AD and dementia in general. Other provinces, notably British Columbia, Alberta and Nova Scotia, have expressed interest in the Ontario model.

In summary, even though the incidence of AD is increasing and it can be a tough diagnosis to make, family physicians have a multitude of resources and should not shy away from the field. With more and more research being conducted in Canada and internationally, the area is bound to become much more prominent in family practice. As such, family physicians have a very important role to play in the early diagnosis and management of the elderly with dementing disorders.

## References

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